

# Notice of Allowability

Application No.

10/027,873

Examiner

William C. Choi

Applicant(s)

KNIFE, RICHARD L.

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to interview conducted 1/21/2005.
2. ☒ The allowed claim(s) is/are 1-6,8-10,12-15 and 17-31.
3. ☒ The drawings filed on 04 August 2003 & 21 December 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

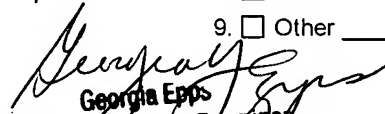
\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 0105.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
Georgia Epps  
Supervisory Patent Examiner  
Technology Center 2800

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Charles Brill on January 21, 2005.

The application has been amended as follows:

1. Claim 14, line 7, delete "said".
2. Claim 14, line 7, between "member" and "for", insert --of said array--.

### CLAIMS

14. (Currently amended) A micromechanical device comprising:
- an array of independently deflectable members, each deflectable member supported by a hinge and spaced apart from a substrate;
  - at least two bias electrodes supported by said substrate, one on each side of an axis of said hinge; and
  - a means associated with ~~[[said]]~~ at least one deflectable member of said array for selectively connecting said deflectable member to a ground potential during a period in which said bias electrodes provide a reset signal.

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Allowed Claims: 1-6, 8-10, 12-15 and 17-31.

### **REASONS FOR ALLOWANCE**

The following is an examiner's statement of reasons for allowance: none of the prior art either alone or in combination disclose or teach of the claimed combination of limitations to warrant a rejection under 35 USC 102 or 103.

Specifically, with respect to independent claim 1, none of the prior art alone or in combination disclose or teach of a micromechanical device comprising at least one member, a switch and at least one bias electrode as claimed, specifically wherein said at least one bias electrode is associated with each said at least one member operable to apply a reset pulse when said member is connected to a ground signal by said switch.

Specifically, with respect to independent claim 14, none of the prior art alone or in combination disclose or teach of a micromechanical device comprising an array of independently deflectable members and at least two bias electrodes, specifically further comprising a means associated with at least one deflectable member of said array for selectively connecting said deflectable member to a ground potential during a period in which said bias electrodes provide a reset signal.

Specifically, with respect to independent claim 19, none of the prior art alone or in combination disclose or teach of a method of operating a micromechanical device comprising grounding a deflectable member and applying a reset signal as claimed,

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specifically comprising electrically floating a deflectable member such that a reset signal does not reposition the electrically floating deflectable member.

Specifically, with respect to independent claim 25, none of the prior art alone or in combination disclose or teach of a method of operating an array of micromechanical elements comprising grounding a deflectable member of a first group of said micromechanical elements and allowing a deflectable member of a second group of said micromechanical elements to electrically float and specifically further comprising applying a reset signal to bias electrodes associated with said micromechanical elements in said first and said second groups.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### **CONCLUSION**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Choi whose telephone number is (571) 272-2324. The examiner can normally be reached on Monday-Friday from about 9:00 am to 6 pm.

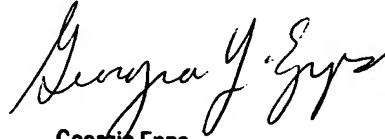
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached on (571) 272-2328. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
William Choi  
Patent Examiner  
Art Unit 2873  
February 4, 2005

  
Georgia Epps  
Supervisory Patent Examiner  
Technology Center 2800